

Earth Day is every day at Warren

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Born the same day as the city of Cheyenne—July 4, 1867, Warren is the nation’s oldest continuously active military installation within the Air Force.

Warren began as a frontier infantry and cavalry post and now serves as the pinnacle of deterrence; throughout the base’s rich history, the environment has flourished under the care of American citizens, both military and civilian who have maintained the base’s environmental heartbeat.

Base make up

There are 64.7 acres of wetlands on Warren. Yes, wetlands. Meadow and riparian vegetation associated with the wetlands located along Crow and Diamond Creeks and at the west end of North Lake Pearson are important wildlife habitat areas.

There are four “lakes” on Warren: Lake Centennial (4.4 acres), North Lake Pearson (12.6 acres), South Lake Pearson (10.6 acres) and the ponds east of Building 841 (2.4 acres).

Warren has been awarded “Tree City USA” status for 18 consecutive years because of the commitment to green energy and community forest issues. Careful pruning and one-on-one treatment by Warren’s master gardener have ensured the health and vitality of Warren’s leafy members.

The base has utilized alternative methods of vegetation control: sheep. The northwest corner of the base has been grazed by sheep in the past because mowers cannot be used due to safety concerns.

Threatened and endangered species

The Colorado butterfly plant

is a white-flowered plant and a subspecies of the Evening Primrose Family. In 2000, the Colorado butterfly plant was placed on the Wyoming Natural Diversity Database Plant Species of Special Concern list. One fact to impress your friends the next time you are at a party: two of the largest known populations of the Colorado butterfly plant occur on Warren and the base regularly enlists the assistance of the University of Wyoming and the U. S. Fish and Wildlife Services to protect and manage the plant populations found on base.

The preble’s meadow jumping mouse may look like an ordinary mouse, but it can launch itself 18 inches into the air and switch direction mid flight by using its tail as a rudder. The Michael Jordan of the mouse world, it can travel three feet in a single jump, and it can also swim.

The black-footed ferret is considered the rarest of North American mammals. Warren works with the U.S. Fish and Wildlife to allow the black-footed ferret to thrive in a protected captive setting on base. Black-footed ferrets are brought in from off-base breeding facilities to a pre-release conditioning facility on base, where the ferrets can interact prior to reintroduction into the wild.

Fish and wildlife

Warren contains habitat areas with fish and wildlife common to this region. There are up to 175 Pronghorn antelope that call Warren home. The antelope are known to wander throughout the base and nibble on foliage.

Warren provides habitat for more than 200 species of birds, including Canada geese, mallard ducks, rock doves,

European starlings and house sparrows. Bald eagles, ferruginous hawks, peregrine falcons and whooping cranes can occur in Warren’s surrounding area.

Recycling

Warren’s recycling and composting programs are working together, emphasizing source reduction and recycling initiatives in support of Air Force “green” goals. Warren’s recycling facility accepts aluminum, steel and tin cans, plastics, cardboard, office paper, mixed paper, magazines and newspapers. There’s even curbside recycling for base residents.

The composting facility accepts biodegradable materials, such as wood, landscaping materials, grass clippings, leaves, manure and tree trimmings. More than 1,200 tons per year of finished compost product is created at Warren. Warren is striving to meet both Air Force Space Command and Air Force goals through continual pursuit and management of an aggressive integrated Solid Waste Management Program that incorporates source reduction, reuse, composting and recycling.

The base has also purchased additional equipment to enable asphalt from road repair to be recycled into a ground-up material suitable for filling potholes and serving as a base for future road construction.

Lead-based paint

Lead-based paint was found in the historic red-brick homes on Warren. Keep in mind, the homes were built approximately 100 years ago, and they didn’t know the effects of lead-based paint to children under the age of 7.

Warren and the Wyoming State Historic Preservation Office resolved to make the 155 officer and enlisted homes safe for the residents. The project, valued at \$28 million, consists of replacing windows, refurbishing doors and porches and removing soil around the homes if necessary.

“Warren received almost the entire Air Force family housing budget for Fiscal Year 2005 to correct the lead-based paint problem in our old, historic homes,” said Col. Michael Carey, 90th Space Wing commander. “The base and the entire Air Force are very committed to ensuring that these homes are safe for our military families as well as ensuring their historical preservation.”

Wind turbines

On the northern perimeter of the base stand two wind turbines, which were completed in 2005. Warren’s wind farm can produce enough energy to power 522 homes annually; the turbines provide roughly 10 percent of Warren’s main base electricity.

“Wind turbines are a perfect renewable energy source for Warren,” said Ken Davis, Warren’s Wind Turbine Project Manager. “We have plenty of wind, an ample window of free space, and the economies of payback make them a cost-effective alternative [to coal- or gas-generated electricity].”

The two Vestas 47 wind turbines cost a little more



Photo by Capt. Nicole Walters

Warren is home to two wind turbines which provide roughly 10 percent of the base's electricity. They were completed in 2005 for a cost of more than 2.2 million, and will pay for themselves in about 10 years.

than \$2.2 million, which was funded from the Department of Defense Energy Conservation Investment Program. The turbines will pay for themselves in approximately 10 years and have a 15- to 20-year lifespan.

Fuel

The fuels office on Warren states the fuel used in diesel vehicles that trip out to the missile complex is biodiesel, which is a mixture of fuel and vegetable oils or animal fats. So far this year, the base has averaged 9,911 gallons used a month.

Biodiesel is extremely beneficial for several reasons. First, it does not require fuel pre-heating and filtration due to issues with coagulation. Second, the fuel system doesn’t have to be modified to use it. Finally, biodegradable and non-toxic biodiesels have fewer emissions and a flash point of 320 degrees Fahrenheit. That means vehicles fueled by pure biodiesel are safer in accidents than those powered by gasoline.

Warren has an aggressive

fuel storage tank management program, applicable to the more than 200 underground storage tanks and 500 above ground storage tanks located both on base and in the missile complex to ensure compliance with all applicable laws.

Clean-up

Should a spill happen, it must be addressed immediately. The Resource Conservation and Recovery Act requires cleanup of current hazardous materials/operations and spills. The Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments Reauthorization Act established the nationwide process to clean up hazardous waste disposal and waste sites.

The Installation Restoration Program is a subcomponent of the Department of Defense-wide Defense Environmental Restoration Program that addresses the identification, investigation, and cleanup of contamination from hazardous substances and pollutants as-

sociated with past practices.

Warren has a good track record and operates in three states and two EPA regions. There are minor areas of contamination associated with underground storage tanks and clean-up is being addressed under state underground storage tank laws and regulations. The state has delegated authority for this program under RCRA.

Attitude

All the technology in the world can’t be matched by the impressive attitude Air Force members have toward “being green”. Turning the thermostat down, turning lights off when leaving a room and buying ‘green’ products have also helped the Air Force to save money while protecting the environment. The Air Force is currently the largest purchaser of renewable energy in the United States and the third largest green power purchaser in the world. Not only here at Warren, but across the Air Force, Earth Day isn’t once a year—it’s every day.



Photo by Senior Airman Tessa Cubbon

Winston Littlejohn, son of Russell Littlejohn, 90th Civil Engineer Squadron Environmental Flight chief, visits with a black footed ferret here recently. The black footed ferret is considered one of the rarest North American mammals.



Photo by Senior Airman Tessa Cubbon

Second Lt. Josh Edwards, 90th Space Wing, places an aluminum can in a bin at the recycling facility here Wednesday. Warren’s recycling facility accepts aluminum, steel and tin cans, plastics, cardboard, office paper, mixed paper, magazines and newspapers.